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# THE UNIVERSITY OF NOTRE DAME'S ALLIANCE FOR CATHOLIC EDUCATION TEACHING FELLOWS PROGRAM

Evaluation of Outcomes and Impact, 2015-2017

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## EXECUTIVE SUMMARY

The ACE Teaching Fellows AmeriCorps program recruits, trains, and places excellent teachers in high needs urban and rural Catholic schools across the country, where they serve for two years while earning a Master of Education degree from the University of Notre Dame. Now in its 24<sup>th</sup> year, the program recently completed an evaluation guided by the following three evaluation questions:

1. To what extent do ACE Teachers perceive growth in professional competence, according to their own self-assessment?
2. To what extent do ACE Teachers grow in professional competence, according to expert observations of their practice?
3. To what extent do students of ACE Teachers experience academic growth, according to performance on achievement tests and compared to students of other first and second year teachers?

Question one was addressed by comparing responses on entry and exit surveys for a variety of measures, including preparedness for teaching and teachers' sense of efficacy. Results showed significant growth on perceptions of preparedness for teaching for all items representing a variety of instructional tasks. Measures of teachers' sense of efficacy did not show significant changes from entry to exit, which is consistent with prior research on the stability of efficacy beliefs from preservice through the first few years of teaching.

Question two involved analysis of ratings from observations by program-affiliated academic supervisors and on-site school principals. ACE Teachers were rated each semester on a variety of indicators across four domains of practice: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. The number of teachers scoring in the "Proficient" or "Exemplary" ratings for each domain was significantly higher in the fourth semester than in the first semester, showing substantial growth over the course of the program.

Question three focused on the impact of the program for the student-level outcome of academic achievement. For a small sample of ACE Teachers, student test scores were obtained along with test scores of students of other beginning teachers in the same dioceses. Using this comparison group and a value-added modeling procedure, results showed that students of ACE Teachers demonstrated more growth in math and reading than students of other beginning teachers in one diocese and similar growth to the comparison group in another diocese.

The findings of this evaluation will be useful for the ACE Teaching Fellows program in several ways, including supporting recruitment by highlighting positive findings and informing strategy for increasing access to data from ACE schools to enable more comprehensive evaluation in the future. ACE Teaching Fellows will continue to engage in rigorous evaluation to better understand and improve its program to serve the mission of strengthening and sustaining Catholic education through national service.

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## **INTRODUCTION: THE ALLIANCE FOR CATHOLIC EDUCATION**

The University of Notre Dame's Alliance for Catholic Education has been operating the ACE Teaching Fellows AmeriCorps program since 1994. This graduate service teaching program recruits, trains, and places high-quality teachers in under-resourced Catholic schools throughout the country, where they serve as teachers of record for two years while earning their Master of Education (M.Ed.) degree from the University of Notre Dame.

The ACE Teaching Fellows program was founded to respond to the problem of a lack of effective teachers in economically disadvantaged urban and rural Catholic schools across the country. Superintendents and principals approached Notre Dame seeking well-prepared educators for their schools, and ACE aimed to fulfil that need. Now, 24 years later, ACE continues to receive far more requests for teachers than we can fill each year, indicating that the need is still great for teachers in challenging placements within Catholic schools.

The leaders of ACE Teaching Fellows have great confidence in the quality of the program, but are still committed to continuous improvement and continuing to demonstrate effectiveness through performance measurement and evaluation. Therefore, a rigorous evaluation was conducted from 2015-2017 to respond to questions of interest to internal and external stakeholders. This report describes the evaluation, with reference to the program theory of change, and presents the results and conclusions for informing future practice.

## **PROGRAM THEORY OF CHANGE**

The ACE Teaching Fellows AmeriCorps program is summarized with the following theory of change statement:

If we recruit and form faith filled, talented, and effective teachers for under-resourced Catholic schools, then students will grow academically, spiritually, and socially; ACE teachers will experience positive and transformational growth; and school communities will experience newfound vitality.

The program logic model includes inputs and activities including recruiting and enrolling applicants, providing an innovate M.Ed. graduate degree program with qualified faculty and support staff, placing teachers in high-needs schools, and providing ongoing professional development, supervision, and support to foster retention in the field of education. Through their service in approximately 100 schools throughout the country, both ACE Teachers (program participants) and their students (program beneficiaries) experience short- and long-term changes in knowledge, skills, and attitudes. Participants experience growth in professional teaching competence as well as personal and spiritual growth through the unique intentional community living aspect of the program. Their success and positive experience in the program will foster a life-long commitment to education and a high level of retention in the field. For beneficiaries, having a well-prepared and dedicated ACE Teacher will enable them to experience academic, personal, and spiritual growth and will contribute to the revitalization of the school community.

While all components of the logic model are important and essential to the program, this evaluation focused on outcomes of ACE Teaching Fellows program on the program participants (AmeriCorps members) and the impact on their students (beneficiaries). The evaluation questions and methods are presented below.

## EVALUATION QUESTIONS

In order to conduct a holistic evaluation of the University of Notre Dame's Alliance for Catholic Education (ACE) program, a multi-tiered set of evaluation questions were articulated at the outset of program design and award receipt. These questions were anchored in the theory of change that drives the ACE program and linked to the program activities, outputs, and outcomes of the program.

The evaluation team considered both process and outcome-focused evaluation questions when initially drafting the evaluation plan, which would then provide feedback on several facets of program design, delivery, and impact. However, feedback from CNCS on the evaluation plan suggested a narrower focus, o with better alignment between study questions and methods. Considering this feedback, the evaluation team revised the evaluation questions and subsequent plan design. As a result, the study focused more specifically on questions related to outcomes for ACE Teachers (the AmeriCorps members) and the impact on their students (the program beneficiaries).

The key evaluation questions for this report are:

EQ1. Member Outcomes: To what extent do ACE Teachers perceive growth in their professional competence, according to their own self-assessment?

EQ2. Member Outcomes: To what extent do ACE Teachers grow in their professional competence, according to expert observations of their pedagogy and practice?

EQ3. Beneficiary Impact: To what extent do students of ACE Teachers experience academic growth, according to performance on achievement tests and compared to students of other first and second year teachers?

Each question will be considered in turn below, with relevant methods and results presented.

## METHODS AND RESULTS

### **Evaluation Question 1**

*To what extent do ACE Teachers perceive growth in their professional competence, according to their own self-assessment?*

The ACE Teaching Fellows AmeriCorps program develops effective professional educators during their two-year commitment. The extent to which members perceive growth in their professional competence is an indication of the overall success of ACE Teaching Fellows. Therefore, self-reported assessments of changes in competence and confidence for professional teaching skills are important considerations for the program.

### **Method**

All admitted participants in the ACE Teaching Fellows program are invited to complete an entry survey once they arrive to campus to begin their summer coursework. The survey is administered electronically through Qualtrics survey software platform during orientation in the first weekend of the ACE summer. Since they are given time to complete the survey during one of the orientation sessions, 100% of ACE Teachers typically participate in the entry survey.

All graduating ACE teachers are invited to complete an exit survey at the conclusion of their second year of ACE. The survey is administered electronically by email invitation through Qualtrics beginning the first week of June. Multiple reminder emails are sent to teachers to encourage their participation before the survey concludes in mid-July. Response rates are typically in the 75-95% participation range.

The surveys were designed in collaboration with ACE faculty and staff and are updated annually to better reflect the data needs of the program. Surveys include both quantitative and qualitative (open-ended questions) data on aspects of the program including motivation for participating in ACE, professional teaching development, community experiences, personal growth, and vocational directions. Results are used to inform decision making related to recruitment efforts, admission criteria, placement of teachers, and ongoing support of teachers

throughout the program as well as for internal and external program evaluation concerns. This evaluation will focus on key questions concerning professional teaching development.

## Results

The following results are based on data from the entry and exit surveys of ACE cohorts 21 and 22. Table 1 shows the dates when these surveys were administered and the number of ACE Teachers completing each survey.

**Table 1. Entry and Exit Surveys of Cohorts 21 and 22**

ACE Cohort	Entry Survey	n	Exit Survey	n
22	June 2015	96	June 2017	84
21	June 2014	95	June 2016	88

ACE Teachers provided their university-issued ID numbers on the surveys, which were used to match pre- and post- survey responses. All exit surveys from both cohorts were matched with pre-surveys, for final sample sizes of 84 and 88, respectively. Entry surveys without corresponding exit surveys were not included in the analyses. These either represented ACE Teachers who did not complete their 2-year AmeriCorps service or who did not respond to repeated requests to complete the exit survey. Paired samples t-tests were then conducted for each item.

As a result of their education coursework, mentoring, and classroom practice during the two years in ACE, ACE Teachers experience tremendous growth as professional teachers. From the entry surveys to the exit surveys, ACE Teachers report significant increases in their level of preparedness for nearly all of the important instructional tasks that were measured (see Tables 2 and 3, responses based on a rating scale of 1= very unprepared, to 5= very prepared).

**Table 2. ACE Teaching Fellows Cohort 21 Preparedness for Instructional Tasks**

Instructional Task	ENTRY		EXIT	
	M	SD	M	SD
Meet the overall demands of teaching*	2.91	0.98	3.69	0.86
Develop learning experiences on standards*	2.40	0.96	3.63	0.82
Vary instruction*	2.85	0.94	3.67	0.88
Maintain an organized classroom*	2.99	0.48	3.94	0.87
Integrate culture*	2.77	0.90	3.53	0.85
Differentiate instruction	2.55	0.92	3.16	0.94
Support English Language Learners*	2.39	1.05	3.14	0.96
Integrate technology	2.81	0.96	3.42	0.91
Communicate with parents of students*	3.11	0.94	3.76	0.90
Build a classroom community*	3.48	0.91	4.05	0.89
Effectively teach religion*	3.17	0.96	3.64	0.95

*Note. \* indicates that the comparison between entry and exit surveys is statistically significant at the .05 level.*

**Table 3. ACE Teaching Fellows Cohort 22 Preparedness for Instructional Tasks**

Instructional Task	ENTRY		EXIT	
	M	SD	M	SD
Meet the overall demands of teaching*	2.66	0.89	3.75	0.71
Develop learning experiences on standards*	2.42	0.93	3.59	0.88
Vary instruction*	2.59	0.84	3.85	0.72
Maintain an organized classroom*	2.72	0.97	3.94	0.81
Integrate culture*	2.62	0.98	3.65	0.80
Differentiate instruction*	2.40	0.88	3.51	0.79
Support English Language Learners*	2.10	0.92	3.38	0.94
Integrate technology*	2.79	1.03	3.49	0.81
Communicate with parents of students*	2.99	0.92	3.72	0.88
Build a classroom community*	3.08	0.98	4.01	0.82
Effectively teach religion*	2.84	0.98	3.59	0.85

*Note.* \* indicates that the comparison between entry and exit surveys is statistically significant at the .05 level.

As Tables 2 and 3 show, ACE Teachers reported statistically significant increases in their level of preparedness for nearly all instructional tasks that were measured in the survey. All of these are essential skills for effective teachers in Catholic schools.

To more accurately assess the professional growth of ACE Teachers, an established measure of teacher sense of efficacy (Tschannen-Moran & Woolfolk Hoy, 2001) was included with demonstrated reliability and validity in the entry and exit surveys. Teacher sense of efficacy refers to teachers' perceptions of their ability to promote student learning and effectively get through to all of their students. Research has shown that teacher sense of efficacy is positively related to factors such as student achievement and motivation, teacher enthusiasm, persistence, and satisfaction with teaching (Midgley, Feldlaufer, & Eccles, 1989; Ross, 1994; Tschannen-Moran & Woolfolk Hoy, 2001; Woolfolk Hoy, Hoy, & Davis, 2009). Table 4 show the

comparison of pre- and post- survey results for this measure for Cohort 22 (the measure was not included in the Cohort 21 surveys).

**Table 4. Teacher Sense of Efficacy for Cohort 22**

Efficacy Belief: How much can you do to...	ENTRY		EXIT	
	M	SD	M	SD
control disruptive behavior in the classroom?	3.88	0.63	4.03	0.61
motivate students with low interest in school?	3.78	0.79	3.54	0.84
get students to believe they can do well?*	4.17	0.70	3.87	0.70
help students value learning?*	4.04	0.72	3.67	0.70
craft good questions for your students?	4.20	0.74	4.35	0.63
get children to follow classroom rules?*	3.82	0.53	4.00	0.65
calm a student who is disruptive or noisy?	3.67	0.60	3.86	0.60
establish a classroom management system?*	3.75	0.76	4.09	0.66
use a variety of assessment strategies?	3.84	0.84	4.05	0.71
provide alternative explanations?	4.16	0.71	4.32	0.68
assist families in helping their children?	3.51	0.84	3.60	0.85
implement alternative strategies?*	3.63	0.63	3.88	0.83
<b>Total Efficacy Scale (alpha=0.90)</b>	<b>3.87</b>	<b>0.52</b>	<b>3.94</b>	<b>0.42</b>

Table 4 shows that most individual items and the total calculated scale for teacher sense of efficacy (mean of all items) did not change significantly from the pre- to the post-survey. That is, teachers reported feeling relatively equally capable of promoting learning and reaching all of their students before they started teaching as at the end of their second year in the classroom. Prior research shows that once teacher sense of efficacy is established in preservice teachers, largely based on their experiences as students (known as “apprenticeship of observation”) and their general self-confidence, it appears to be resistant to change (Woolfolk Hoy, 2000).

Nevertheless, five individual items on the scale did result in statistically significant differences from the pre- to post- survey, but these results were in mixed directions. Two items were rated higher during the pre-survey than the post-survey; getting students to believe they can

do well and helping students value learning. This suggests that teachers may be overconfident in their abilities to shape students' own perceptions of their competence and value of learning prior to teaching. Prior research shows that preservice teachers are generally optimistic and that their sense of efficacy often decreases upon beginning teaching as the realities and complexities of teaching set in (Woolfolk Hoy, 2000).

However, three of the items were rated higher at the time of the post-survey; getting children to follow rules, establishing a classroom management system, and implementing alternative strategies to reach students. These items suggest that ACE Teachers do experience real gains in teaching competence during their time in the program, as evidenced by an increase in efficacy for these areas of teaching.

### **Evaluation Question 1 Summary**

Analysis of entry and exit surveys for ACE Teachers shows that the teachers experience self-reported growth in instructional competence during their time in the ACE Teaching Fellows Program. For both cohorts included in this study, the ability to “build a classroom community” was highest rated in terms of preparedness at the time of the post survey. The ACE program greatly emphasizes the importance of working to establish and maintain a positive classroom community, so it is a point of pride that our teachers indicate they feel well prepared in this area.

The lowest rated instructional task for both cohorts was “supporting English language learners.” We recognize that this is a difficult skill for any teacher and a true challenge in modern American education. We will continue to seek ways to assist our teachers in responding to this challenge, such as through additional seminars and courses targeted to teaching English as a new language.

## **Evaluation Question 2**

*To what extent do ACE Teachers grow in their professional competence, according to expert observations of their pedagogy and practice?*

ACE aims to train and place high quality teachers in Catholic schools across the country in order to provide the best possible education for students in need. Teacher quality is often cited as the most significant factor contributing to student academic performance (Harris & McCaffrey, 2010; Sanders & Horn, 1998). One indicator of teacher quality is their actual practice and performance in the classroom, which moves beyond what teachers know to what they do and how they enact knowledge in practice. Accordingly, teacher performance assessments can be viewed as measures of teacher quality (Caughlan & Jiang, 2014). These observations of actual teaching practice are invaluable, since ideally “performance assessments are regarded as part of the learning process for teacher candidates” (p. 375). Used both formatively and summatively, such performance assessments provide one feedback channel for measuring teachers’ growth and development.

### **Method**

Academic Supervision Evaluations by Faculty

EDU 65950: Supervised Teaching (Supervision) is a course that centers on the over 3,000 hours of classroom teaching completed over the two years of ACE. Assigned faculty of supervision and instruction visit each school site to monitor ACE Teachers' professional development and progress towards addressing and meeting performance indicators. During the site visits, additional sources will provide information about ACE teachers’ progress: post-observation meetings with the ACE AmeriCorps teacher, examination of instructional and classroom management materials, examination and discussion of content course assignments, and meetings with the Mentor Teacher, Principal, and diocesan Superintendent. Documentation of site visits occurs via a two-year site visit form that standardizes field notes and aligns a two-year narrative with performance indicators. Upon reviewing all of the relevant documents and sources, the faculty of supervision and instruction rate applicable performance indicators. These

ratings correlate to a course grade. The satisfactory meeting of performance indicators provides evidence of meeting corresponding State of Indiana Standards for Educators.

The performance indicators form a framework for feedback and evaluation throughout each semester based on Mentor Teacher and Principal instruments (at the local school level), faculty site visits and classroom observations, observed teaching artifacts, discussion, reflective writing, and content coursework (during the second year). Given this body of evidence, the faculty of supervision and instruction rate the appropriate indicators and assign a course grade. The number and specific performance indicators are differentiated across the four semesters – these increase in number and shift in focus as the ACE Teacher gains in experience.

The performance indicators are organized in four domains: Planning and Preparation, Classroom Environment, Instruction, and Professional Responsibilities. Domain one focuses on Planning and Preparation and assesses indicators such as whether the teacher demonstrates knowledge of content and pedagogy and is able to select instructional objectives. Domain two attends to “Classroom Environment” and measures indicators such as whether the teacher manages classroom procedures and manages student behavior. Domain three focuses on “Instruction” and tracks indicators such as engagement of students in learning and how well teachers provide feedback to students. The fourth instructional domain is referred to as “Professional Responsibilities,” and it gauges indicators such as whether a teacher maintains accurate records, their effectiveness at communicating with parents and guardians, and whether they demonstrate professionalism.

The performance indicator rating scale ranges from “unsatisfactory” to “exceptional” performance in meeting all descriptors pertaining to a performance indicator. This latter, exceptional, rating is rare and denotes mastery beyond general beginning teacher level. For purposes of course grading, “proficient” is standardized to the A range. For any given semester, a minimum threshold number of performance indicators must be scored in the “proficient” range, while a maximum number of “basic” ratings and no indicators rated at the “unsatisfactory” level contribute to an A grade. Table 5 contains the rating scale aligned with the performance indicators.

**Table 5. Performance Indicator Ratings and Descriptions**

<b>Rating</b>	<b>Descriptor</b>
Unsatisfactory	Limited evidence, from site visits, supervision course reflections and assignments, principal evaluations, mentor feedback, and content coursework that some descriptors relating to the performance indicator are being met or addressed. In light of this rating, improvement goals continue to be maintained or revised.
Basic	Evidence, from these multiple sources, that descriptors relating to the performance indicator are being met and addressed through teaching practices-performances at a basic level of proficiency. Professional development goals are being maintained or may be revised.
Proficient	Evidence, from these multiple sources, that observed descriptors relating to the performance indicator are fully met and/or maintained through teaching practices-performances. Professional development goals are being maintained or may be revised.
Exceptional	Evidence, from multiple sources, that all descriptors relating to the performance indicator are not only maintained at a proficient level, but some or all of these areas continue to be improved upon or met through new and unique teaching practices-performances.

For purposes of program evaluation, ACE tracks the percentage of teachers who have been rated “proficient” and above in each performance indicator each semester, with the goal of each ACE Teaching Fellow scoring in the “proficient” and above range for each performance indicator by the end of the fourth semester.

## Academic Supervision Evaluations by Principals

The school principal (or designee) supports the ACE Teacher and serves as “clinical supervisor” with an evaluative role. The administrator provides support for the ACE teacher much as would be provided to any new teacher in the building; providing appropriate policies, handbooks, curriculum guides and generally orienting them to the school and community. In addition, fulfilling the role of evaluator requires that the principal (or designee) observe and meet with the ACE teacher. Most principals observe and conference with the ACE teacher two or three times each semester.

Once each semester, principals complete an evaluation of their ACE Teacher via an electronic evaluation form. The form requires principals to rate ACE Teachers on the same differentiated performance indicators as the Academic Supervision Evaluations. The results are recorded on a two-year tracking sheet for each ACE Teacher and summarized each semester for each cohort of ACE Teaching Fellows. Similar to the Academic Supervision Evaluations by Faculty, the results are used for program and individual teacher evaluation.

## Results

In the academic years 2015-2016 and 2016-2017, ACE graduated two cohorts of teachers, ACE 21 and ACE 22. Given that these two cohorts are the only two who have completed the program in these academic years, the results and data analysis will focus only on these two cohorts. Cohort ACE 23 taught in academic year 2016-2017 but will not graduate from ACE until May 2018.

### Academic Supervision Evaluations for ACE 21

The summary table of ACE 21’s Academic Supervision Evaluations is included below. Reviewing the table, the growth of ACE 21 AmeriCorps teachers from semester 1 to semester 4 is evident. In Semester 4, even with the increased number and scope of performance indicators, far more teachers were rated proficient or above than in semester 1.

ACE AmeriCorps teachers showed statistically significant growth in all four domains from Fall 2014 to Spring 2016. Table 6 summarizes the results of a z-Test for the difference in the proportion of students scoring in the “proficient” and “exceptional” categories at two time

points (i.e., 1st and 4th semester) by domain. The growth shown by ACE 21 AmeriCorps members is statistically significant for all four domains. This substantial growth across all four domains is an important goal for ACE in teacher formation.

**ACE 21 Teaching Fellows Supervisor Evaluation - Results**  
 E = Exceptional P = Proficient, B = Basic, U = Unsatisfactory

	Semester 1 (Fall 2014)				Semester 2 (Spring 2015)				Semester 3 (Fall 2015)				Semester 4 (Spring 2016)			
	n = 72				n = 72				n = 72				n = 72			
	E	P	B	U	E	P	B	U	E	P	B	U	E	P	B	U
<b>Pillar I Professional Teaching</b>																
<b>Domain 1: Planning and Preparation</b>																
1. Demonstrates knowledge of content and pedagogy	0%	56%	44%	0%	1%	72%	26%	0%	4%	93%	4%	0%	8%	86%	6%	0%
2. Demonstrates knowledge of students									0%	89%	11%	0%	3%	89%	8%	0%
3. Designs coherent unit-based instruction									0%	74%	26%	0%	4%	82%	14%	0%
4. Selects instructional objectives	0%	69%	31%	0%	0%	83%	17%	0%	1%	94%	4%	0%	4%	90%	6%	0%
5. Selects instructional outcomes/goals									0%	86%	14%	0%	4%	86%	10%	0%
6. Designs assessments to provide evidence of learning									1%	72%	26%	0%	0%	88%	13%	0%
7. Demonstrates knowledge of resources					0%	60%	40%	0%	0%	97%	3%	0%	1%	97%	1%	0%
<b>Domain 2: The Classroom Environment</b>																
1. Establishes a culture for learning					0%	65%	35%	0%	11%	76%	13%	0%	15%	79%	6%	0%
2. Manages classroom procedures	0%	74%	26%	0%	0%	88%	13%	0%	3%	93%	4%	0%	6%	93%	1%	0%
3. Manages student behavior	0%	57%	40%	3%	0%	68%	32%	0%	0%	94%	6%	0%	3%	94%	3%	0%
4. Organizes physical space	0%	81%	19%	0%	1%	94%	4%	0%	6%	93%	1%	0%	8%	90%	1%	0%
<b>Domain 3: Instruction</b>																
1. Communicates clearly and accurately	0%	85%	15%	0%	0%	89%	11%	0%	0%	92%	8%	0%	0%	92%	8%	0%
2. Uses questioning and discuss techniques	0%	47%	53%	0%	0%	57%	43%	0%	1%	79%	19%	0%	1%	83%	15%	0%
3. Engages students in learning	0%	56%	44%	0%	0%	71%	29%	0%	3%	82%	15%	0%	7%	79%	14%	0%
4. Provides feedback to students	0%	65%	35%	0%	0%	83%	17%	0%	0%	92%	8%	0%	0%	96%	4%	0%
5. Modifies instruction according to developmental level, language proficiency, and instructional needs of students					0%	13%	88%	0%	0%	64%	36%	0%	1%	89%	10%	0%
6. Modifies instruction for children with learning exceptionalities									0%	17%	83%	0%	1%	68%	31%	0%
7. Assesses Student Learning	0%	42%	58%	0%	0%	60%	40%	0%	0%	90%	10%	0%	1%	86%	13%	0%
<b>Domain 4: Professional Responsibilities</b>																
1. Maintains accurate records	0%	88%	13%	0%	0%	93%	7%	0%	0%	94%	6%	0%	0%	99%	1%	0%
2. Communicate with parents and guardians	0%	78%	22%	0%	0%	89%	11%	0%	3%	93%	4%	0%	3%	97%	0%	0%
3. Shows professionalism	0%	92%	8%	0%	0%	93%	7%	0%	3%	94%	3%	0%	10%	88%	3%	0%
<b>Pillar II Community</b>																
1. Contributes to the school community					3%	93%	4%	0%	10%	88%	3%	0%	24%	76%	0%	0%
2. Contributes to the larger community													7%	75%	18%	0%
3. Promotes student engagement with community resources									1%	57%	42%	0%	4%	85%	11%	0%
<b>Pillar III Spirituality</b>																
1. Creates environment of respect and rapport	0%	82%	18%	0%	0%	89%	11%	0%	4%	92%	4%	0%	14%	86%	0%	0%
2. Fosters character and ethical development													6%	94%	0%	0%
3. Fosters spiritual development in children													7%	90%	3%	0%
4. Serves as spiritual and ethical role model													18%	82%	0%	0%

**Table 6. Cohort ACE 21 Supervision Results z-Test**

Fall 2014	N 2014	Spring 2016	N 2016	B-A	Standard Error	Z Calc	p-value	Domain
63%	72	92%	72	29%	0.066	4.482	0.000*	1
70%	72	97%	72	27%	0.057	4.695	0.000*	2
59%	72	87%	72	28%	0.071	3.912	0.000*	3
76%	72	96%	72	20%	0.055	3.697	0.000*	4

*Note. \* indicates that the change in proportion of students scoring proficient or excellent between the first and fourth semesters is statistically significant at the .05 level.*

## Academic Supervision Evaluations for ACE 22

The summary table of ACE 22’s Academic Supervision Evaluations is included below. Once again, the growth of ACE 22 teachers from Semester 1 to Semester 4 is clear across all performance indicators. Table 7 summarizes the results of a z- Test for the proportion of students in semester 1 vs. semester 4 scoring in the “proficient” and “exceptional” categories. The growth shown by ACE 22 Teachers is again statistically significant in all four domains. ACE 22 Teachers especially excelled at “organizing physical spaces,” “shows professionalism,” “contributes to the school community,” and all indicators of spirituality by Semester 4, with 15% or more of ACE 22 teachers rated as “exceptional” in these performance indicators.

### ACE 22 Teaching Fellows Supervisor Evaluation - Results

E = Exceptional P = Proficient, B = Basic, U = Unsatisfactory

	Semester 1 (Fall 2015)				Semester 2 (Spring 2016)				Semester 3 (Fall 2016)				Semester 4 (Spring 2017)			
	n = 75				n = 75				n = 75				n = 75			
	E	P	B	U	E	P	B	U	E	P	B	U	E	P	B	U
<b>Pillar I Professional Teaching</b>																
<b>Domain 1: Planning and Preparation</b>																
1. Demonstrates knowledge of content and pedagogy	0%	72%	28%	0%	1%	83%	15%	1%	4%	96%	0%	0%	12%	87%	1%	0%
2. Demonstrate knowledge of students									5%	81%	13%	0%	11%	87%	3%	0%
3. Designs coherent unit-based instruction									4%	55%	41%	0%	5%	75%	20%	0%
4. Selects instructional objectives	0%	64%	36%	0%	0%	87%	13%	0%	0%	89%	11%	0%	4%	95%	1%	0%
5. Selects instructional outcomes/goals									3%	61%	36%	0%	8%	77%	15%	0%
6. Designs assessments to provide evidence of learning									3%	75%	23%	0%	8%	85%	7%	0%
7. Demonstrates knowledge of resources					3%	81%	16%	0%	5%	91%	4%	0%	12%	85%	3%	0%
<b>Domain 2: The Classroom Environment</b>																
1. Establishes a culture for learning					3%	56%	41%	0%	4%	80%	16%	0%	12%	79%	9%	0%
2. Manages classroom procedures	0%	71%	29%	0%	1%	80%	19%	0%	3%	96%	3%	0%	8%	92%	0%	0%
3. Manages student behavior	0%	43%	57%	0%	0%	68%	31%	1%	3%	91%	7%	0%	1%	97%	1%	0%
4. Organizes physical space	0%	83%	17%	0%	3%	84%	13%	0%	3%	95%	3%	0%	15%	85%	0%	0%
<b>Domain 3: Instruction</b>																
1. Communicates clearly and accurately	0%	73%	27%	0%	0%	77%	23%	0%	1%	92%	7%	0%	7%	89%	4%	0%
2. Uses questioning and discuss techniques	0%	59%	41%	0%	0%	75%	25%	0%	1%	88%	11%	0%	0%	91%	9%	0%
3. Engages students in learning	0%	59%	41%	0%	3%	72%	25%	0%	4%	88%	8%	0%	8%	88%	4%	0%
4. Provides feedback to students	0%	76%	24%	0%	1%	81%	17%	0%	3%	89%	8%	0%	5%	95%	0%	0%
5. Modifies instruction according to developmental level, language proficiency, and instructional needs of students					0%	37%	63%	0%	3%	68%	29%	0%	1%	91%	8%	0%
6. Modifies instruction for children with learning exceptionalities									0%	37%	63%	0%	0%	55%	45%	0%
7. Assesses Student Learning	0%	53%	47%	0%	0%	69%	31%	0%	1%	87%	12%	0%	7%	85%	8%	0%
<b>Domain 4: Professional Responsibilities</b>																
1. Maintains accurate records	0%	85%	15%	0%	3%	81%	16%	0%	4%	89%	7%	0%	12%	88%	0%	0%
2. Communicate with parents and guardians	0%	79%	21%	0%	0%	84%	16%	0%	1%	96%	3%	0%	4%	96%	0%	0%
3. Shows professionalism	0%	97%	3%	0%	3%	84%	12%	1%	7%	89%	4%	0%	19%	80%	1%	0%
<b>Pillar II Community</b>																
1. Contributes to the school community					1%	92%	7%	0%	3%	96%	1%	0%	20%	77%	3%	0%
2. Contributes to the larger community													8%	67%	25%	0%
3. Promotes student engagement with community resources									0%	75%	25%	0%	8%	77%	15%	0%
<b>Pillar III Spirituality</b>																
1. Creates environment of respect and rapport	0%	89%	11%	0%	1%	89%	9%	0%	3%	96%	1%	0%	19%	81%	0%	0%
2. Fosters character and ethical development													15%	85%	0%	0%
3. Fosters spiritual development in children													15%	85%	0%	0%
4. Serves as spiritual and ethical role model													25%	75%	0%	0%

**Table 7. Cohort ACE 22 Supervision Results z-Test**

Fall 2015	N 2015	Spring 2017	N 2017	B-A	Standard Error	Z Calc	p-value	Domain
68%	75	93%	75	25%	0.061	4.061	0.000*	1
65%	75	97%	75	32%	0.058	5.516	0.000*	2
64%	75	89%	75	25%	0.068	3.732	0.000*	3
81%	75	96%	75	15%	0.051	2.886	0.004*	4

*Note. \* indicates that the change in proportion of Teachers scoring proficient or excellent between the first and fourth semesters is statistically significant at the .05 level.*

#### Principal Evaluations of ACE 21

Results of principal evaluations for ACE 21 Teachers are included below. As is evident in Table 8, 96%, 95%, 91%, and 95% of ACE AmeriCorps teachers are rated by principals as proficient or exceptional across the four respective domains by the 4th semester of teaching. The table also summarizes the results of the z-Test comparison for the difference in the proportion of students scoring in the proficient or exceptional categories. ACE 21 Teachers did show clear growth in each of the four domains from semester one to semester four, and that growth was statistically significant for three of the four domains. It should be noted that high initial ratings by principals makes it less likely for significant changes to be found.

**ACE 21 Teaching Fellows Principal Evaluation - Results**

A = Advanced P = Proficient, B = Basic, U = Unsatisfactory

	Semester 1 (Fall 2014)				Semester 2 (Spring 2015)				Semester 3 (Fall 2015)				Semester 4 (Spring 2016)			
	n = 69				n = 66				n = 62				n = 58			
	A	P	B	U	A	P	B	U	A	P	B	U	A	P	B	U
<b>Pillar I Professional Teaching</b>																
<b>Domain 1: Planning and Preparation</b>																
1. Demonstrates knowledge of content and pedagogy	41%	49%	10%	0%	45%	45%	9%	0%	63%	35%	0%	2%	62%	36%	2%	0%
2. Demonstrates knowledge of students									47%	52%	2%	0%	55%	45%	0%	0%
3. Designs coherent unit-based instruction									47%	44%	6%	2%	53%	41%	5%	0%
4. Selects instructional objectives	22%	65%	13%	0%	29%	56%	15%	0%	52%	42%	5%	2%	59%	36%	5%	0%
5. Selects instructional outcomes/goals									52%	45%	2%	2%	52%	43%	5%	0%
6. Designs assessments to provide evidence of learning									45%	45%	6%	2%	45%	40%	7%	0%
7. Demonstrates knowledge of resources					33%	52%	14%	0%	47%	47%	5%	2%	55%	40%	5%	0%
<b>Domain 2: The Classroom Environment</b>																
1. Establishes a culture for learning					39%	48%	12%	0%	61%	32%	5%	2%	62%	34%	3%	0%
2. Manages classroom procedures	30%	43%	25%	1%	32%	48%	18%	2%	52%	37%	10%	2%	53%	41%	5%	0%
3. Manages student behavior	26%	41%	30%	3%	27%	47%	24%	2%	47%	35%	16%	2%	50%	45%	5%	0%
4. Organizes physical space	25%	49%	25%	1%	29%	55%	17%	0%	47%	42%	11%	0%	53%	40%	7%	0%
<b>Domain 3: Instruction</b>																
1. Communicates clearly and accurately	30%	51%	19%	0%	39%	52%	9%	0%	48%	45%	5%	2%	57%	40%	3%	0%
2. Uses questioning and discuss techniques	33%	43%	23%	0%	38%	50%	12%	0%	53%	37%	8%	2%	66%	31%	3%	0%
3. Engages students in learning	38%	36%	26%	0%	41%	45%	14%	0%	60%	34%	5%	2%	62%	33%	5%	0%
4. Provides feedback to students	23%	45%	30%	0%	29%	48%	21%	0%	60%	35%	0%	2%	55%	41%	3%	0%
5. Modifies instruction according to developmental level, language proficiency, and instructional needs of students					21%	42%	36%	0%	37%	31%	24%	3%	36%	47%	12%	0%
6. Modifies instruction for children with learning exceptionalities									31%	26%	23%	3%	40%	36%	10%	0%
7. Assesses Student Learning	19%	51%	30%	0%	26%	53%	20%	2%	45%	47%	6%	2%	50%	45%	5%	0%
<b>Domain 4: Professional Responsibilities</b>																
1. Maintains accurate records	20%	54%	25%	0%	32%	55%	14%	0%	40%	55%	3%	2%	55%	40%	5%	0%
2. Communicate with parents and guardians	20%	59%	20%	0%	32%	45%	20%	0%	39%	50%	10%	2%	48%	45%	7%	0%
3. Shows professionalism	45%	46%	9%	0%	56%	36%	8%	0%	58%	34%	6%	2%	72%	22%	5%	0%
<b>Pillar II Community</b>																
1. Contributes to the school community					59%	29%	12%	0%	69%	26%	5%	0%	78%	21%	2%	0%
2. Contributes to the larger community													62%	26%	7%	0%
3. Promotes student engagement with community resources									48%	32%	13%	0%	43%	47%	7%	0%
<b>Pillar III Spirituality</b>																
1. Creates environment of respect and rapport	42%	43%	14%	0%	33%	52%	14%	0%	58%	32%	8%	2%	67%	31%	2%	0%
2. Fosters character and ethical development													74%	24%	2%	0%
3. Fosters spiritual development in children													62%	34%	3%	0%
4. Serves as spiritual and ethical role model													71%	29%	0%	0%

**Table 8. ACE 21 Principal Observation Results z-Test**

Fall 2014	N 2014	Spring 2016	N 2016	B-A	Standard Error	Z Calc	p-value	Domain
88%	69	96%	58	7%	0.047	1.587	0.112	1
71%	69	95%	58	23%	0.062	3.785	0.000*	2
74%	69	91%	58	17%	0.065	2.661	0.008*	3
83%	69	95%	58	13%	0.054	2.343	0.019*	4

*Note. \* indicates that the change in proportion of students scoring proficient or excellent between the first and fourth semesters is statistically significant at the .05 level.*

## Principal Evaluations of ACE 22

Principals rated ACE 22 teachers in each semester and results are shown below. Table 9 summarizes the changes in ratings from semester one to semester four. Principals were enthusiastic about their ACE Teachers’ performance, rating them with high levels of “Advanced” by semester four. Some indicators had up to 73% of teachers being rated as “Advanced.” As the z-score table indicates, ACE Teachers have once again shown statistically significant growth over time in professional teaching practice across three of the four domains of our performance indicators as rated by their principals.

### ACE 22 Teaching Fellows Principal Evaluation - Results

A = Advanced, P = Proficient, B = Basic, U = Unsatisfactory

	Semester 1 (Fall 2015)				Semester 2 (Spring 2016)				Semester 3 (Fall 2016)				Semester 4 (Spring 2017)			
	n = 70				n = 65				n = 69				n = 63			
	A	P	B	U	A	P	B	U	A	P	B	U	A	P	B	U
<b>Pillar I Professional Teaching</b>																
<b>Domain 1: Planning and Preparation</b>																
1. Demonstrates knowledge of content and pedagogy	27%	57%	16%	0%	31%	60%	9%	0%	57%	42%	1%	0%	57%	43%	0%	0%
2. Demonstrate knowledge of students									43%	58%	1%	0%	54%	43%	3%	0%
3. Designs coherent unit-based instruction									39%	58%	3%	0%	48%	48%	5%	0%
4. Selects instructional objectives	23%	60%	17%	0%	37%	57%	6%	0%	41%	58%	1%	0%	56%	41%	3%	0%
5. Selects instructional outcomes/goals									38%	61%	1%	0%	49%	48%	3%	0%
6. Designs assessments to provide evidence of learning									30%	64%	6%	0%	44%	44%	10%	0%
7. Demonstrates knowledge of resources					28%	55%	17%	0%	45%	49%	6%	0%	52%	41%	6%	0%
<b>Domain 2: The Classroom Environment</b>																
1. Establishes a culture for learning					42%	45%	14%	0%	54%	45%	1%	0%	63%	33%	3%	0%
2. Manages classroom procedures	19%	51%	27%	3%	31%	45%	25%	0%	49%	41%	10%	0%	51%	43%	6%	0%
3. Manages student behavior	13%	44%	40%	3%	23%	45%	32%	0%	36%	51%	13%	0%	40%	51%	10%	0%
4. Organizes physical space	23%	61%	16%	0%	22%	57%	22%	0%	46%	46%	7%	0%	46%	49%	5%	0%
<b>Domain 3: Instruction</b>																
1. Communicates clearly and accurately	30%	54%	16%	0%	40%	49%	11%	0%	51%	48%	1%	0%	59%	37%	5%	0%
2. Uses questioning and discuss techniques	23%	47%	29%	0%	34%	46%	20%	0%	45%	51%	4%	0%	59%	38%	3%	0%
3. Engages students in learning	33%	41%	26%	0%	43%	45%	12%	0%	45%	54%	1%	0%	60%	37%	3%	0%
4. Provides feedback to students	27%	53%	19%	0%	29%	52%	18%	0%	48%	45%	7%	0%	49%	46%	5%	0%
5. Modifies instruction according to developmental level, language proficiency, and instructional needs of students					23%	46%	29%	0%	26%	48%	22%	0%	43%	40%	17%	0%
6. Modifies instruction for children with learning exceptionalities									19%	42%	28%	0%	37%	40%	17%	0%
7. Assesses Student Learning	21%	50%	26%	0%	28%	51%	22%	0%	29%	65%	6%	0%	46%	48%	6%	0%
<b>Domain 4: Professional Responsibilities</b>																
1. Maintains accurate records	23%	53%	21%	0%	35%	49%	14%	0%	36%	57%	7%	0%	51%	44%	5%	0%
2. Communicate with parents and guardians	26%	50%	24%	0%	35%	49%	15%	0%	49%	39%	12%	0%	52%	41%	5%	2%
3. Shows professionalism	54%	39%	7%	0%	52%	38%	9%	0%	68%	26%	6%	0%	67%	25%	8%	0%
<b>Pillar II Community</b>																
1. Contributes to the school community					57%	38%	5%	0%	68%	29%	3%	0%	71%	29%	0%	0%
2. Contributes to the larger community													57%	33%	3%	0%
3. Promotes student engagement with community resources									39%	39%	19%	0%	46%	43%	10%	0%
<b>Pillar III Spirituality</b>																
1. Creates environment of respect and rapport	44%	44%	11%	0%	51%	40%	8%	2%	61%	36%	3%	0%	62%	33%	5%	0%
2. Fosters character and ethical development													65%	32%	3%	0%
3. Fosters spiritual development in children													65%	29%	5%	0%
4. Serves as spiritual and ethical role model													73%	22%	5%	0%

**Table 9. ACE 22 Principal Observation Results z-Test**

Fall 2015	N 2015	Spring 2017	N 2017	B-A	Standard Error	Z Calc	p-value	Domain
84%	70	95%	63	12%	0.051	2.311	0.021*	1
70%	70	94%	63	24%	0.062	3.793	0.000*	2
76%	70	91%	63	15%	0.063	2.386	0.017*	3
84%	70	94%	63	10%	0.053	1.926	0.054	4

*Note. \* indicates that the change in proportion of students scoring proficient or excellent between the first and fourth semesters is statistically significant at the .05 level.*

### Evaluation Question 2 Summary

While the overall growth and success of ACE 21 and 22 is affirming, there are individual areas for potential improvement that are highlighted by the data summary tables. The lowest rated performance indicator for both ACE cohorts in ratings from academic supervisors was “Modifies instruction for children with learning exceptionalities.” While this is understandably a difficult skill to master as a second-year teacher, ACE AmeriCorps teachers do have a three-credit summer course on this exact topic. Looking forward, we will seek to better integrate this course with the vast knowledge and resources of ACE’s new Program for Inclusive Education (PIE). The PIE faculty and staff have years of practical experience designing modified instruction plans in elementary and high school classrooms. This practical focus and expertise will help our ACE Teachers better meet the diverse needs of their students.

Principal evaluations are generally more positive than academic supervisor ratings, perhaps because principals spend more time with the ACE Teachers at the school site and observe their teaching more frequently than the academic supervisors. We are especially pleased to note that 78% of ACE 21 and 71% of ACE 22 Teachers were rated “advanced” at “Contributes to the school community,” a hallmark of the ACE Teaching Fellows program. ACE Teachers are expected to go above and beyond in their contributions to the school community: chairing clubs, coaching sports, tutoring students, and organizing fundraisers. ACE Teachers truly impact the school communities in which they serve as AmeriCorps members.

### **Evaluation Question 3**

*To what extent do students of ACE Teachers experience academic growth, according to performance on achievement tests and compared to students of other first and second year teachers?*

We assess year-to-year changes in academic achievement to evaluate whether students who were taught by ACE Teachers demonstrate improved academic performance in literacy and/or math, and whether that performance is better than that of students of non-ACE teachers with similar levels of experience. For this initial exploration of student achievement, we established data sharing agreements with two partner dioceses, who have a total of 16 ACE Teachers from cohorts 20, 21, and 22, who completed their service in summer 2015, 2016 and 2017, respectively. We used student test scores from the 2014-15, 2015-16 and 2016-17 school years to estimate student growth models.

#### **Data**

Test scores come from the annual fall administration of the Iowa Assessments, taken by all students in grades 3-8 in diocese 1, and grades 2-8 in diocese 2. Match rates (the proportion of students with a posttest who have a matching pretest in the prior grade and year) are shown in Table 10 below, and are consistent with those in other school systems in previous studies across the nation (Mathematica Policy Research, 2014). Students may be missing a pretest or a posttest for many reasons, including absence or moving out of the diocese.

**Table 10: Match Rates for Each Diocese**

Post-test Grade	Match Rate (2016-17 Diocese 1)	Number of Students (Diocese 1)	Match Rate (2016-17 Diocese 2)	Number of Students (Diocese 2)
3	NA	NA	0.87	344
4	0.90	880	0.91	337
5	0.90	842	0.90	285
6	0.80	817	0.89	266
7	0.88	924	0.91	294
8	0.94	923	0.90	244

## Measures

### *Norm-Referenced Tests and the Normal Curve Equivalent (NCE)*

Norm-referenced tests, such as the Iowa Tests, are used to compare a student's score at a given point in time to the scores of a nationally-representative group of students. The most recent Iowa Test norms were set in 2011, and all scores from fall 2012 onward are calibrated to this norm-reference group.<sup>1</sup>

Data can be aggregated, and comparisons can be made, across years if the test scores are sufficiently horizontally equated; that is, scores in the same grade have the same meaning each year. One analysis of Wisconsin state test data indicates that this condition may not always be met (Meyer and Dokumaci, 2010). We use the Normal Curve Equivalent, or NCE, to measure results, partly in an effort to avoid this equating issue. NCE scores range from 1 to 99, with an average student having an NCE of 50. Scores above 50 indicate students that are performing above grade level, while scores below 50 indicate those students scoring below grade level. A change of one NCE unit has the same meaning for all students, regardless of where the student starts on the achievement distribution. One NCE equals approximately 0.05 standard deviations.

### *Measuring growth*

In order to measure annual student growth, we use a value-added model. This model uses linear regression to estimate each teacher's relative contribution to his or her students' test score growth over time. This measure is limited to tested grades and subjects, and is not intended to be the only means of evaluating a teacher.

Students must have both a pretest and a posttest in consecutive grades to be included in these analyses. Separate value-added models of mathematics and reading are estimated for each grade level and year. Value-added scores are produced for each teacher in each year, grade, and subject; these can be aggregated to provide an overall measure for all ACE AmeriCorps teachers

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<sup>1</sup> Prior to the development of the 2011 norms, all scores were calibrated to the previous 2005 norms. There are slight differences in scoring when using the 2005 and 2011 norms, so scores before and after this transition should be interpreted with caution.

in each year, as well as one for all other first- and second-year teachers, and for other groups of teachers throughout each diocese.

The grade-level model used for the value-added growth analysis for math is displayed below:

$$Math_{it} = \gamma_1 Math_{it-1} + \gamma_2 Read_{it-1} + \alpha S_{it} + \varepsilon_{it}$$

In this model, the math test score ( $Math_{it}$ ) for student  $i$  in year  $t$  is predicted by the student's prior-year math test score ( $Math_{it-1}$ ), prior-year reading test score ( $Read_{it-1}$ ), individual teacher effect ( $\alpha_s$ ) (shown as a vector  $\alpha$  multiplied by a matrix of teacher indicators  $S_{it}$ ) and a random error term ( $\varepsilon_{it}$ ). There is an effect ( $\alpha_s$ ) for each teacher in the diocese; in this model, we assume students remain with the same teacher for the entire year, because we lack information about within-year student mobility. The model for reading scores is the same.

Using this model is an improvement over simply calculating the difference between each student's current and prior year test scores because it allows for the adjustment of growth predictions for each student's prior achievement (not just performance in one subject). It improves upon measures like growth targets because it does not simply measure whether a student did or did not meet a target – it measures the difference between a projection and the actual score. In addition, we correct for the reliability of each pretest – explicitly acknowledging that the test is not a perfect measure of student performance -- via an “errors-in-variables” regression procedure that incorporates the standard errors of measurement of each score, as reported by the test vendor.

After the grade-level regressions are estimated, the results are centered. We then aggregate to the appropriate level (teacher, or group of teachers), and apply a statistical shrinkage procedure in order to minimize the appearance of small classrooms in the extremes of the distribution of results due to random noise. By implementing this process, we acknowledge that the measured effects consist of the “true” effect the teacher had on student growth, as well as a “noise” component that is attributable to measurement error.

First, we determine the variance of the “unshrunk” effect estimates ( $\alpha_s$ ). We then compute the variance of estimation error, which is the weighted average of the squared standard errors of the value-added estimates ( $\alpha_s$ ). The variance of the “true” value-added effects is then

the difference between the “unshrunk” variance and the “noise” variance. The average reliability of the estimates is calculated as the ratio of the “true” variance to the “unshrunk” variance, and the reliability of each individual teacher effect is calculated similarly, using the individual “true” variance. We then “shrink” the effects by multiplying by their respective reliabilities in order to achieve the value-added score.

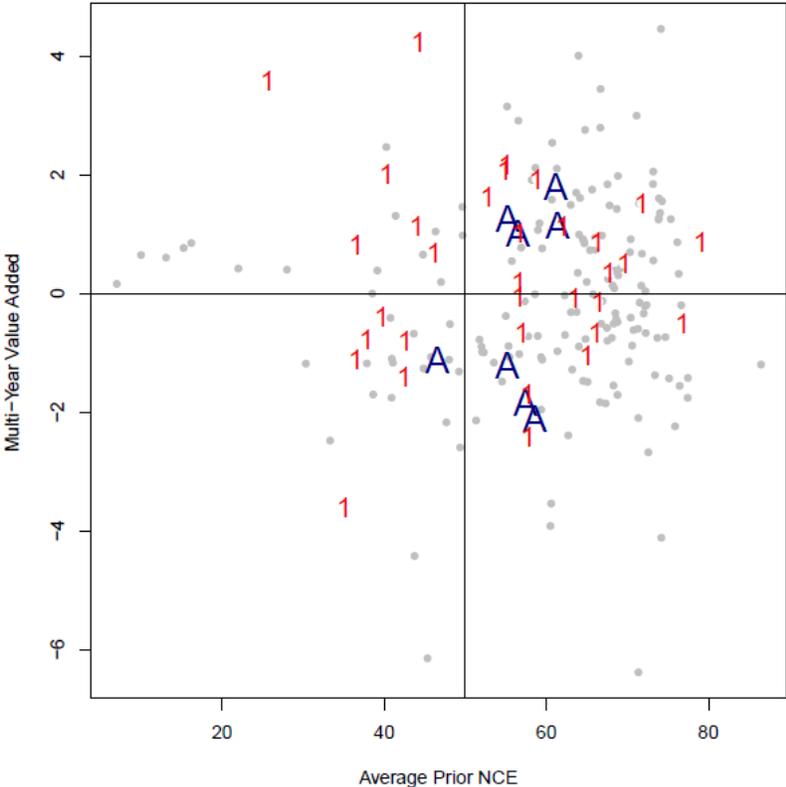
Because the value-added results are centered, a growth score of zero NCE indicates the same growth relative to other teachers in the diocese. A positive growth score suggests higher-than-average growth, while a negative growth score suggests lower-than-average growth, relative to other teachers in the diocese. Because value-added results are estimates based on imprecise (and finite) data, all value-added results are reported with a standard error. This allows us to determine which teachers’ effects are statistically significantly different from the diocesan average of 0.

## **Results**

We examine growth results graphically by showing them relative to the students’ starting points. Sometimes known as a “quadrant” graph, this display shows the average initial achievement of a teacher’s students on the horizontal axis, and their growth score on the vertical axis. Teachers in the lower left have students whose initial scores are lower than average, and they also demonstrate growth that is below the diocesan average. Teachers in the upper left also begin with scores that are below average, but show growth that is above average. Teachers in the lower right have initial scores that are above the national average, but show growth that is below the diocesan average, while those in the upper right are above average in both initial score and growth. In figures 1 and 2 (for diocese 1, reading and math) and figures 3 and 4 (for diocese 2, reading and math), ACE teachers are shown with red “A” letters, while other first- and second-year teachers are shown with blue “1” numbers. In figure 1, we see that ACE teachers in diocese 1 had students whose incoming reading performance was typically above the national average, but not as far above average as several other teachers, while student growth was above average for some teachers and below average for others; we see a similar result in figure 2 for math. In figure 3, we find that ACE teachers in diocese 2 taught students whose incoming reading scores were slightly below the national average, and these students had above-average growth; students of ACE teachers in this diocese had below-average incoming scores, and

demonstrated less-than-average growth for four of the six teachers, as shown in figure 4.

Figure 1: Diocese 1 Reading Multi-Year Value Added vs. Prior Reading NCE



Note: In figures 1 through 4, value-added scores above 0 indicate growth that was better than the diocesan average. Average prior NCE above 50 indicates that students' incoming scores were above the national average.

Figure 2: Diocese 1 Math Multi-Year Value Added vs. Prior Math NCE

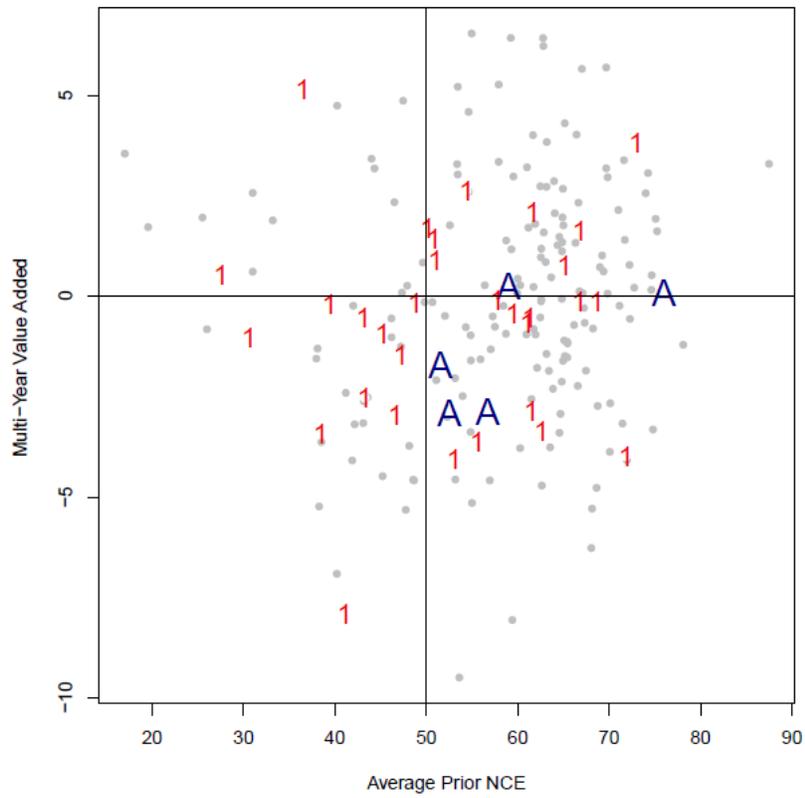


Figure 3: Diocese 2 Reading Multi-Year Value Added vs. Prior Reading NCE

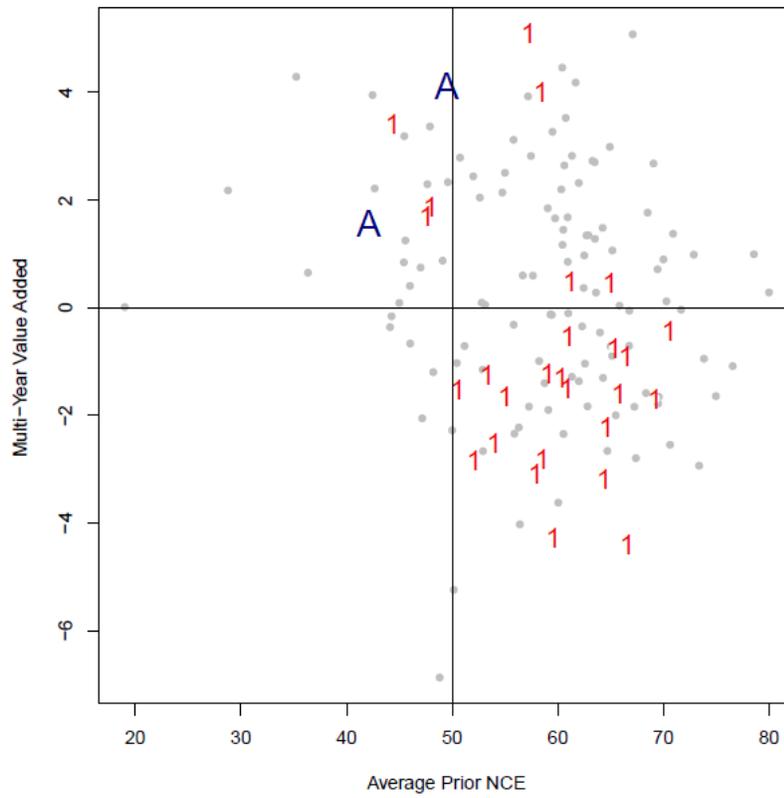
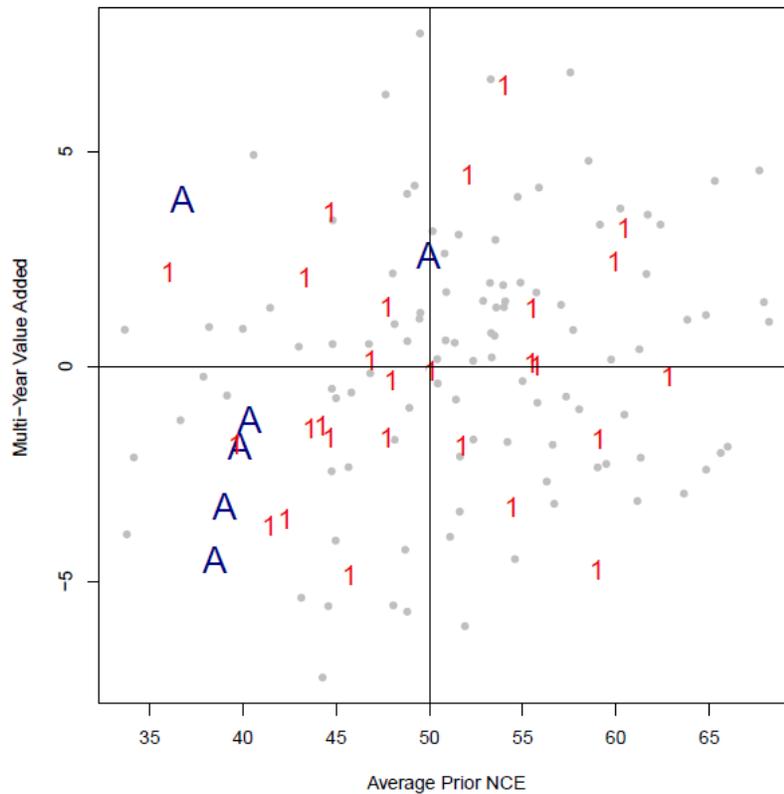


Figure 4: Diocese 2 Math Multi-Year Value Added vs. Prior Math NCE



In figures 5 and 6 (for diocese 1, reading and math) and 7 and 8 (for diocese 2), the teachers are shown ordered by their growth scores, with error bars. These displays indicate that (as found by other value-added users (i.e., Harris, 2011)) few teachers have growth scores that are significantly better or worse than the diocesan average (because most error bars include 0). ACE Teachers are shown in blue. This display is for only the first- and second-year teachers.

Figure 5: Diocese 1 Multi-Year Reading Teacher Value-Added - New Teachers

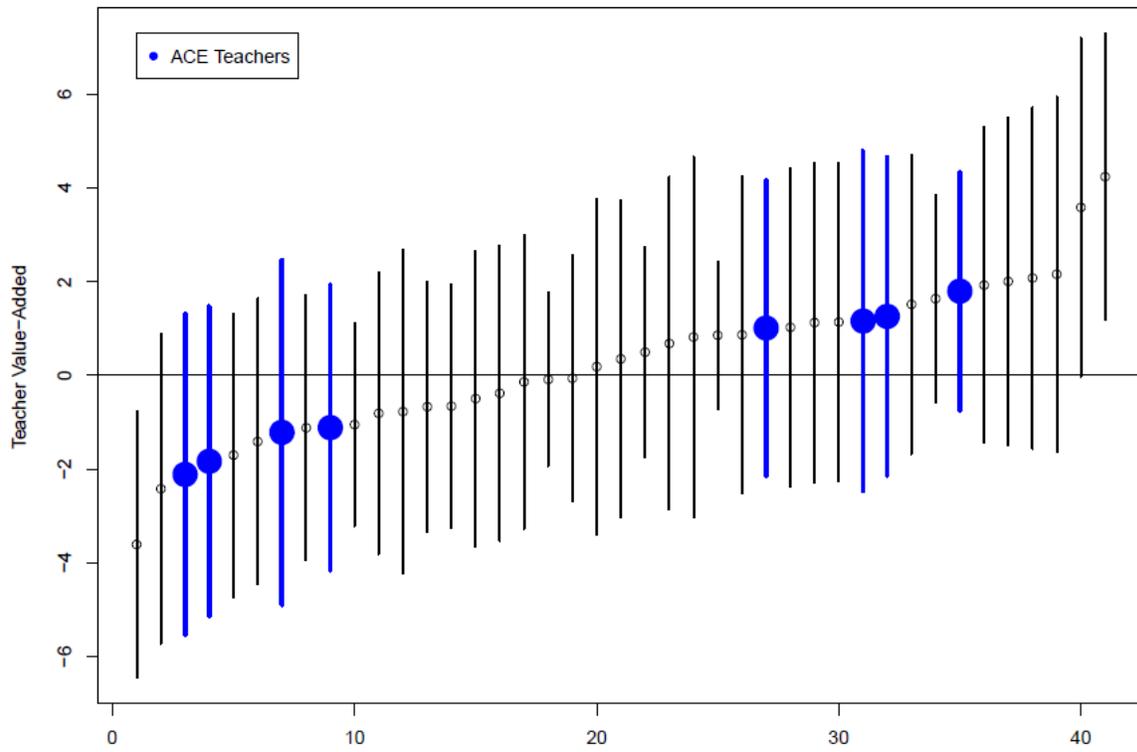


Figure 6: Diocese 1 Multi-Year Math Teacher Value-Added – New Teachers

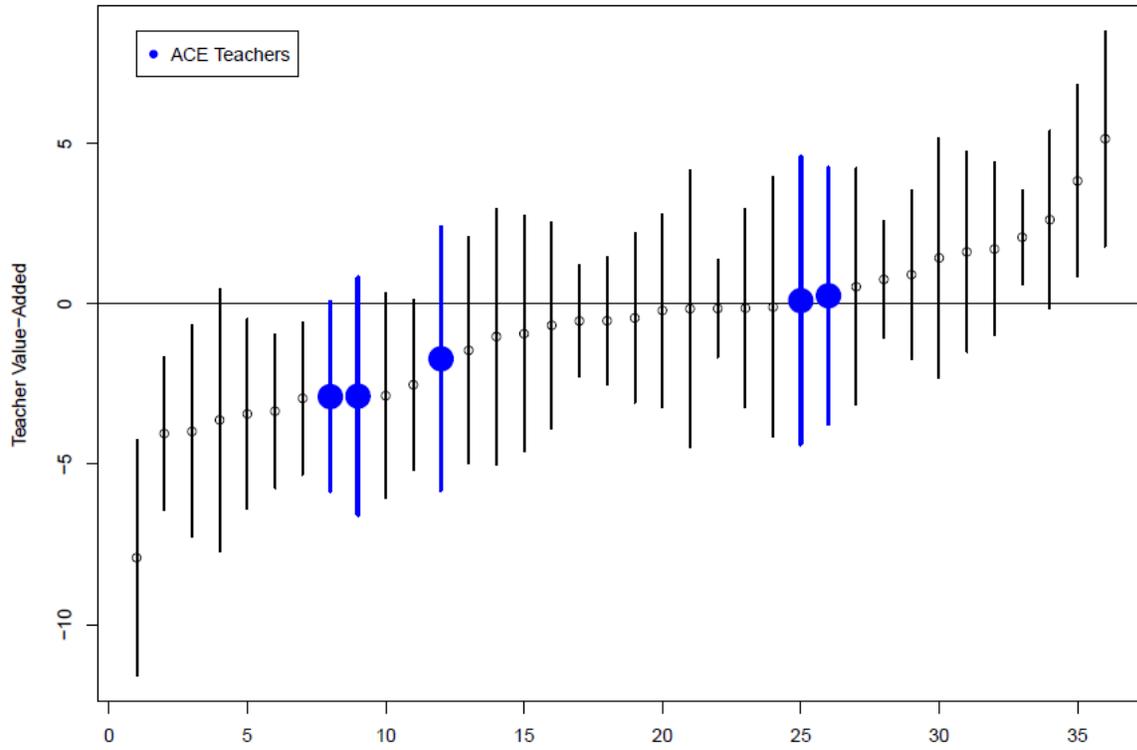


Figure 7: Diocese 2 Multi-Year Reading Teacher Value-Added - New Teachers

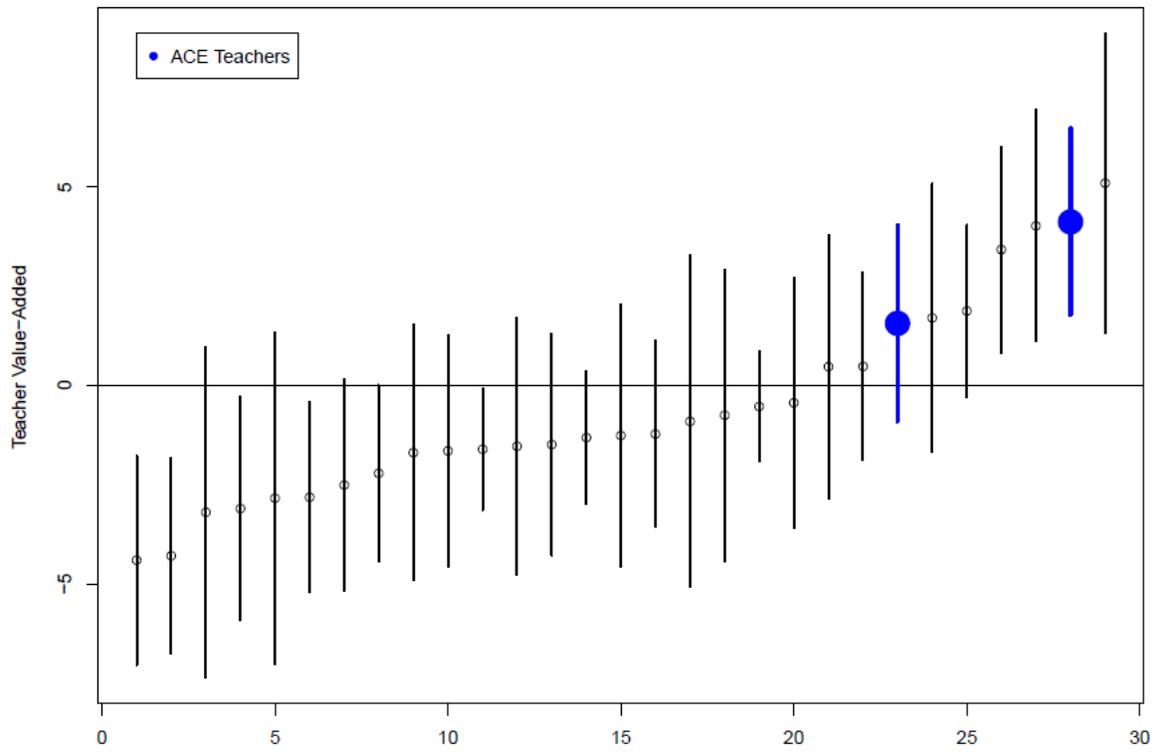
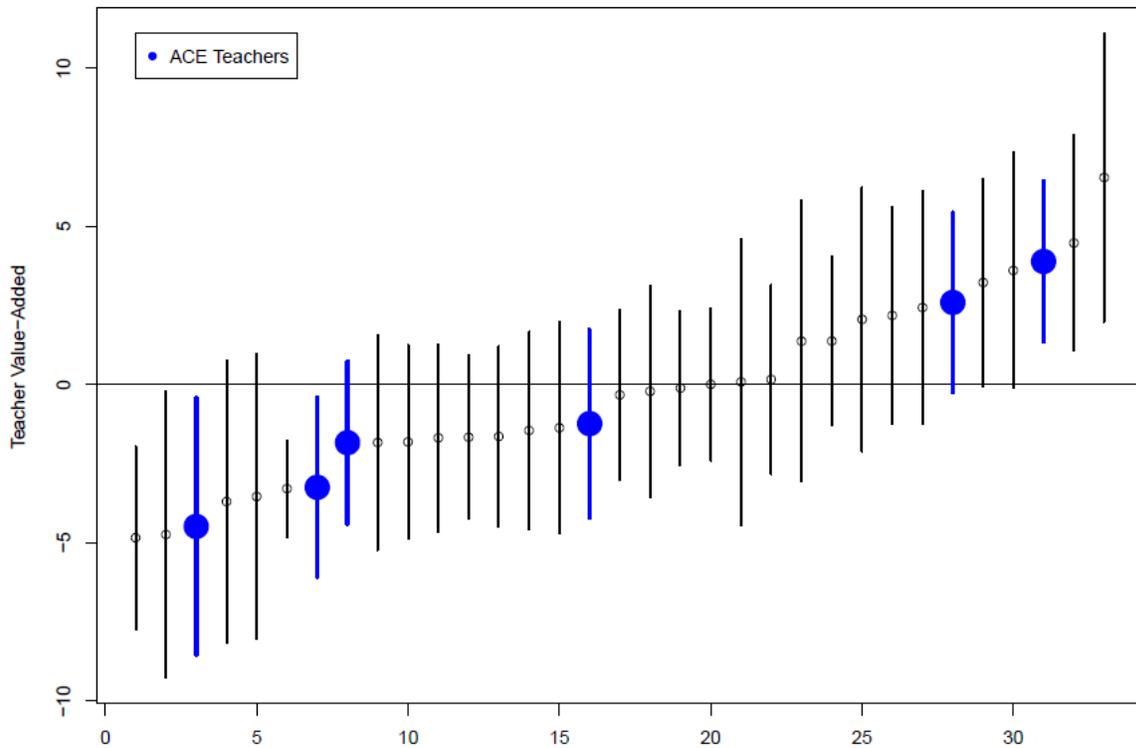


Figure 8: Diocese 2 Multi-Year Math Teacher Value-Added – New Teachers



When scores are aggregated by teachers’ levels of experience, we find that the students of ACE teachers demonstrated growth that was 0.12 NCEs above average in diocese 1 in reading, and 1.86 NCEs below average in math, while other first- and second-year teachers had growth that was 0.50 NCEs above average in reading, and 0.40 NCEs below average in math. In both reading and math, the differences between these groups are statistically significant, indicating that the students of ACE teachers demonstrated less growth than the students of other first- and second-year teachers

In diocese 2, students of ACE teachers had growth that was 1.99 NCEs above average in reading, and 0.21 NCEs below average in math, while other first- and second-year teachers had growth that was 1.31 NCEs below average in reading, and 0.44 NCEs below average in math. In both reading and math, the differences between these groups are statistically significant, indicating that the students of ACE teachers showed significantly more growth than the students of other first- and second-year teachers in this diocese.

### *Limitations*

The sample of only 2 dioceses is not sufficient to be generalizable to all ACE Teaching Fellows. We will continue to negotiate access to data from additional diocesan partners to increase our ability to make claims about the effectiveness of ACE Teachers. For the data reported here, it is important to remember that students are not randomly assigned to schools or teachers. Student background characteristics and other factors outside the control of the school or teacher may have an influence on attainment and growth. Consequently, any large attainment “gains” or indicators of growth when comparing ACE Teaching Fellows to other teachers may not be due purely to differences in effectiveness. Any apparent performance differences may also reflect underlying differences in their respective student populations, school contexts, or other factors. It should be noted that ACE Teachers are placed in the most difficult to fill teaching positions within their schools, so they likely are teaching in more challenging situations than other first and second year teachers within the diocese, which may also contribute to student achievement.

### **Student Engagement**

In addition to measuring student achievement through test scores, we also measured growth in student engagement as a result of being in an ACE Teacher’s class as part of our performance measurement. ACE developed an instrument, the Students of ACE Teachers Engagement Survey (SATES), to measure students’ perceptions of academic engagement and belonging. Items were taken from the Chicago Consortium for School Research surveys, which have been used extensively and found to be reliable and valid with elementary and middle school students. The SATES survey is a retrospective pre-post survey that is taken by students in a sample of ACE Teachers’ classes at the end of the year. The survey asks students to think about how they feel in their ACE Teachers’ class and then answer the same questions while thinking about how they felt in the previous year, prior to being in an ACE Teachers’ class.

The scale for academic engagement included four items: “I usually look forward to coming to this class,” “I work hard to do my best in this class,” “Sometimes I get so interested in my work I don’t want to stop,” and “The topics we are studying are interesting and challenging.” The belonging scale included five items: “I feel like a real part of my class,” “People here notice

when I'm good at something," "Other students in my class take my opinions seriously," "People in this class are friendly to me," and "I'm included in lots of activities at this school."

The SATES was taken by 364 students of ACE Teachers. The scale scores were calculated by averaging the responses to each item within the scale for each individual student. When compared, 251 (69%) students reported equal or higher levels of academic engagement with an ACE Teacher than in the previous year, and 226 (62%) reported equal or higher levels of belonging with an ACE Teacher than in the previous year. In the future, we will continue to use the SATES instrument with more students, rolling it out to all ACE Teachers' classes.

### **Evaluation Question 3 Summary**

Over the two-year period under study, students of ACE Teachers showed more growth in both math and reading than students of other first- and second-year teachers in one diocese, but less growth than students of other first- and second-year teachers in a second diocese. It is not possible to determine whether these results are representative of all ACE Teachers in all of the dioceses where they are placed, because data is not readily available beyond these two dioceses; even within these dioceses, consistent measures of school context are not available. As data collection procedures improve in Catholic schools, further exploration of the performance of ACE teachers' students will become feasible, both by expanding to additional dioceses, and by making more appropriate adjustments for school context.

## CONCLUSION

The findings of this evaluation affirm the high quality of teacher preparation offered by the ACE Teaching Fellows AmeriCorps program. From their own perspective in self-reported survey responses to the expert observations of academic supervisors and school principals, our members experience tremendous professional growth in instructional competence during their time in the program.

One way this finding can be helpful for the program is to publicize the evaluation as evidence of professional growth for recruitment purposes. Many applicants are drawn to the ACE program because they desire not only to do service, but also to gain professional experience and training for a career in education. The findings of this evaluation show that in addition to earning a graduate degree, participants will develop expertise in all areas of teaching and gain confidence in their ability to teach through the program. Excerpts from the evaluation report can be used in marketing materials and highlighted on the ACE website to draw attention to the evidence of the program effectiveness in the area of professional growth. Improvements in evidence-based marketing efforts could lead to increased amount and quality of applications, subsequently leading to an even stronger cohort of AmeriCorps members.

Findings related to student achievement in ACE Teachers' classrooms were inconclusive due to the small sample size. ACE Teaching Fellows should incorporate into its strategy the need for more robust data-sharing partnerships with dioceses in which our teachers serve. Obtaining more data to further investigate the academic performance of students will help clarify the findings of this evaluation and lead to decisions about ways to improve the preparation of teachers. Preliminary results of student engagement surveys show that students of ACE Teachers report improvement in academic engagement and belonging while having an ACE Teacher.

## References

- Caughlan, S., & Jiang, H. (2014). Observation and teacher quality: Critical analysis of observational instruments in preservice teacher performance assessment. *Journal of Teacher Education*, 65(5), 375-388.
- Harris, D.N. (2011). *Value-added measures in education: What every educator needs to know*. Cambridge, MA: Harvard Education Press.
- Harris, D. N., & McCaffrey, D. F. (2010). Value-added: Assessing teachers' contributions to student achievement. In M. Kennedy (Ed.), *Teacher assessment and the quest for teacher quality: A handbook* (pp. 251–282). San Francisco: Jossey-Bass.
- Isenberg, E., and Walsh, E. (2014). *Measuring Teacher Value Added in DC, 2013–2014 School Year: Final Report*. Washington, DC: Mathematica Policy Research. Available: <https://dcps.dc.gov/sites/default/files/dc/sites/dcps/publication/attachments/MeasuringValueAddedinDC.pdf>.
- Meyer, R. & Dokumaci, E. (2010). *Value-added models and the next generation of assessments*. Austin, TX: Center for K-12 Assessment & Performance Management. Available at <https://www.ets.org/Media/Research/pdf/MeyerDokumaciPresenterSession4.pdf>
- Midgley, C., Feldlaufer, H., & Eccles, J.S. (1989). Change in teacher efficacy and student self- and task-related beliefs in mathematics during the transition to junior high school. *Journal of Educational Psychology*, 81, 247-258.
- Ross, J. A. (1994). The impact of an inservice to promote cooperative learning on the stability of teacher efficacy. *Teaching and Teacher Education*, 10, 381-394.
- Sanders, W. L., & Horn, S. P. (1998). Research findings from the Tennessee Value-Added Assessment System (TVAAS) database: Implications for educational evaluation and research. *Journal of Personnel Evaluation in Education*, 12(3), 247-256.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2001). Teacher efficacy: Capturing an elusive construct. *Teaching and Teacher Education*, 17, 783-805.
- Tschannen-Moran, M., & Woolfolk Hoy, A. (2007). The differential antecedents of self-efficacy beliefs of novice and experienced teachers. *Teaching and Teacher Education*, 23, 944-956.
- Woolfolk Hoy, A. E. (2000). *Changes in teacher efficacy during the early years of teaching*. Paper presented at the annual meeting of the American Educational Research Association, New

Orleans, LA. Retrieved from

<http://wps.ablongman.com/wps/media/objects/290/297451/changes%20in%20efficacy.pdf>.

Woolfolk Hoy, A., Hoy, W. K., & Davis, H. A. (2009). Teachers' self-efficacy beliefs. In K. Wentzel & A. Wigfield (Eds.), *Handbook of motivation in school*. Mahwah, NJ: Erlbaum.